

REMARKS

Claims 1-7 are all the claims pending in the application.

I. Claim Rejections - § 112:

Claims 1-6 are rejected under 35 U.S.C. § 112, second paragraph. In particular, the Examiner considers the claims to be indefinite allegedly because it is not readily apparent if the claims are directed to a driving apparatus or a driving apparatus in combination with an assisting mechanism. The Examiner asserts that the preamble fails to positively recite the assisting mechanism, but the assisting mechanism is positively recited within the claims.

In addition, the Examiner notes alleged ambiguities regarding the driving gears.

Applicants amend claims 1-2 in order to clarify that the claims are directed to the driving apparatus in combination with the assisting mechanism. Claims 3-6 are already directed to a door closer, and as described in the specification, the door closer (100) includes the driving apparatus (30) and the assisting mechanism (20). See FIG. 1 also.

Regarding all of the rejected claims, as discussed in the specification at pages 12-13, the driving sources (e.g. driving motors 32u, 32b) are each provided with a driving gear (e.g. worms 33u, 33b). FIG. 4 illustrates an exemplary embodiment in which a driving gear 33u, 33b is provided at each driving source 32u, 32b. FIG. 4 illustrates only two driving sources and two driving gears, but the invention is not limited to only two. A driven gear (e.g. worm wheel 34) is engaged with each of the driving gears. An idle gear (e.g. 35) is driven by the driven gear. An output gear (e.g. 36) is driven by the idle gear.

Each of the gears has a rotational shaft. For purposes of distinguishing the various rotational shafts from each other, they are described as first, second, third, etc. Each driving

gear, driven gear, idle gear and output gear has its own rotational shaft. The shafts are parallel or orthogonal to each other. Thus, the rotational shafts of the driving gears (i.e. first rotational shaft of each driving gear) is orthogonal to the rotational shaft of the driven gear (i.e. second rotational shaft). FIG. 4 clearly illustrates this structure in which the rotational shaft of the driven gear (e.g., worm wheel 34) is orthogonal to the first rotational shaft of each driving gear (i.e. worms 33u, 33b). The driven gear, idle gear and output gear all have axis (rotational shafts) that are parallel to each other as illustrated.

In view of the foregoing, claims 1-6 are believed definite and patentable.

II. Claim Rejections – Prior Art:

Claim 7 is rejected under 35 U.S.C. § 102(e) as being anticipated by newly cited Suzuki et al. (6,739,646).

Claim 7 is amended to clarify that the driven gear is engaged with all of the driving gears rather than a separate driven gear for each driving gear. This change is supported by FIG. 4.

The claimed invention according to claim 7 is directed to a door closer which comprises an assisting mechanism and a driving apparatus that drives the assisting mechanism.

Each of a plurality of driving sources has a driving gear. A driven gear is engaged with all of those driving gears of the driving sources. With this structure, the overall size is reduced compared to other prior art structures because multiple smaller motors can be used to drive the driven gear rather than a larger single motor.

Suzuki fails to disclose a driven gear that is engaged with all of the driving gears of the driving sources. Suzuki fails to disclose that such a driven gear rotates in order to activate the

alleged assisting mechanism 7. Although motors 81 and 91 may have gears, there is no disclosure that driving gears of each motor would be engaged with the same driven gear.

Thus, claim 7 is not anticipated by Suzuki and should be allowable.

No prior art rejections have been made against claims 1-6; each of these claims should be found allowable accordingly.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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